

Ambient Particulate Monitor

ES-640

The Model ES-640 is a continuous or portable particulate monitor with TSP, PM 10, or PM 2.5 inlet heads.

Features

- "Real Time" Monitoring
- Continuous data recording
- Simple operation
- Rugged design
- Remote data reporting
- Digital Data storage
- Wind Sector Control option
- Operates on 12 VDC or 100-240 VAC
- Built-In inlet heater

The ES-640 is a complete, self-contained, particulate monitoring system. Designed to collect and record 'real time' information on airborne particulate concentration for such applications as road dust measurements, boundary or fence line monitoring, fugitive emissions, and workplace monitoring.

A single portable waterproof enclosure contains the laser sensor, flow system, inlet heater, and digital recorder. Extremely easy to install without complicated programming.



The Model ES-640 Digital Particulate Monitor is for continuous monitoring and recording.

A laser optical sensor is used to detect and measure particulate concentrations up to 1 milligram per cubic meter. The continuous flow optical sensor is combined with purge air to ensure accurate measurements in adverse environments.

Data is digitally recorded and stored with time and date information. An RS-232 port provides a convenient method of polling stored data using direct connection to a laptop computer, optional modem, or optional radio modem. A new palm-sized Data Transfer Module is optionally available, to transport data from the ES-640 to any PC.



Met One Instruments, Inc.

Corporate Sales & Service: 1600 Washington Blvd., Grants Pass, OR 97526, Phone (541) 471-7111, Fax (541) 471-7116
www.metone.com

Calibration

Factory calibration of the ES-640 is traceable to reference gravimetric method using Arizona Fine dust. Field calibration is simplified with an easy two step process for setting zero adjustment.

Sensitivity adjustment is carried out by capping the air sampling inlet and adjusting the output against a built-in reference light.

Installation

Installation is a snap. Each system is pretested and certified. The accessory tool kit enables anyone to install and use the sampler.

For portable applications, carrying cases provide convenient transport, and the "Easi-Up" tripod takes less than 5 minutes to deploy.

Construction

The ES-640 uses highest quality materials, aluminum alloys, stainless steel and fiberglass NEMA 12 enclosure. All electronics are conservatively rated, circuit boards are environmentally coated and contain built-in surge protection.

Data Storage

When data is recorded on hourly basis, internal memory module is sufficient to collect data for a period in excess of 200 days.

Standard Equipment

- Inlet Heater, G1003

Accessories

- Tripod, G1001, 2m high
- Data Transfer Module, UX-961, RS-232 type complete with cables
- Modem, G1004, Installed

- Radio Modem, G1005, installed complete
- Wind Sensor, G1006, for wind sector control, complete with mounting hardware and cabling

Data Transfer Module

The optional palm-size Data Transfer Module may be used to transfer data from the ES-640 site to any computer equipped with a RS-232 communications port.

Large Built-in Display

The GT-640 includes a keyboard with 8 x40 character back-lit LCD display which allows system configuration, operation and retrieval of data with simple menu-driven commands and context sensitive hot-keys.

Prompted display menu provides the easiest, quickest way to setup and scan data. Special calibration mode marks data gathered during calibration periods.

Password Protection

Set-up parameters are protected by four character passwords to ensure data integrity. Passwords may be operator changed.

Averaging Periods

Quick and easy setting of flexible averaging periods of 1, 5, 15, or 60 minutes ensures compliance with regulatory requirements.

Automatic Alarms

Two automatic alarms may be set to signal personnel about hazardous conditions or to turn equipment on or off in the event that the dust concentration exceeds regulatory or operator set concentration.

Software

Air Software™ and Air Plus Software™ are complete communications, data collection and data reporting tools. This software supports modem, radio, direct connection and the G1002 Data Transfer Module. Both programs generate summary reports and Air Plus provides graphic recordings and charts.

Specifications

Concentration Range:	0 - 1000 mg/m ³ (0 - 1 mg/m ³)
Sensitivity:	1 microgram
Sample:	Once per second
Sample Rate:	2 liters per minute
Averaging Period:	Selectable 1,5,15,60 min
Display:	LCD back lit, 8 x 40 characters
Power:	12 VDC from external battery, solar panel or 115/230 VAC using power adapter module
Outputs:	RS-232 for modem, radio, or direct connection to PC
Data Storage:	210 days @ 1 hour storage interval
Dimensions:	15.75 in. (40 cm) x 11.75 in. (30 cm) x 8 in. (20 cm)
Weight:	23 lbs (10.4 kg)

All specifications are at reference conditions, and are subject to change without notice.
